#### AIR WAR COLLEGE

#### **AIR UNIVERSITY**

# THE FUTURE OF THE EUROPEAN AIR TRANSPORT COMMAND: AN ANALYSIS OF CAPABILITY ENHANCEMENTS FROM THE ITALIAN AIR FORCE AND AIR MOBILITY

### **COMMAND**

By

Luca Mazzini, Lieutenant Colonel, Italian Air Force

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: Col James D. Hamilton

15 February 2016

# **DISCLAIMER**

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the US government, the Department of Defense, the Air University, or the Italian Air Force. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.



#### **Biography**

Lieutenant Colonel Luca Mazzini is assigned to the Air War College, Air University, Maxwell AFB, AL. He joined the Italian Air Force Academy in 1994. He earned his pilot wings in 1999 at 61ft Wing in Lecce AFB flying the Aermacchi MB339. He is qualified combat ready in tactical transport, personnel airdrops, material airdrops, NVG operations, assault landing and takeoff procedures, low level flight, and search and rescue missions on the C130H, C130J, C130J-30 and KC130J. Colonel Mazzini was the Commander of the 50th Tactical Transport Squadron from 2013 to 2015. He holds a bachelor's degree in Aeronautical Science and a master's degree in Political Science. He is a qualified tactics transport instructor, safety officer, and CRM facilitator. He has participated in numerous national and NATO real operations in the Balkans, Afghanistan, Iraq, Lebanon, Libya, Somalia and many other African Counties during humanitarian missions. He has more than 5000 flying hours.

Colonel Mazzini was decorated in 2012 from the President of the Italian Republic Giorgio Napolitano with the "Onoreficenza Militare Italiana" (O.M.I.). This is the highest Italian Military Decoration. Lt Col Luca Mazzini received the award for the evacuation of more than one hundred people before the outbreak of the 2011 Libyan War.

#### **Abstract**

This essay examines the operational construct of the European Air Transport Command (EATC) and analyzes the United States' Air Mobility Command and the Italian Air Force to identify mission enhancing advancements that will expand EATC capacity and increase its efficiency. This research is a qualitative analysis and historical review of Air Mobility Command (the most comparable American unit) and the European Air Transport Command. It addresses what lessons can be drawn from Air Mobility Command and applied to the European Air Transportation Command; and how the participation of Italy will be a great opportunity to bring the experiences that the Italians gained during the last twenty years of operations with NATO allies into the "European common basket." Qualitative data and historical information were derived from military publications, research essays, books and technical agreements. This essay identifies Italy's decision to join the European Air Transport Command as a pivotal opportunity. The research argues that the European Air Transport Command can significantly enhance its capabilities and capacity by standardizing missions, procedures, and equipment across multi-national participants. Six recommendations emerge ranging from procedural changes to force structure development. The recommendations include standardized airdrop procedures; modified equipment acquisition; cross-nation recognition of airworthiness certifications; common air refueling training and operations; standardized flight duty regulations; development of an infectious patient transportation strategy; and the creation of mobile ground support units to assist in deployment/redeployment operations.

#### Introduction

In the last two decades the rise of international terrorism and the profound instability of many countries have influenced the way wars are waged all around the globe. In fact, the ongoing operations in Afghanistan, Middle East, Libya and Somalia require continuous logistic connections with America and Europe.<sup>1</sup> At the same time, the international economic crises forced many nations to reduce military spending<sup>2</sup> with the impelling necessity to identify new strategies to accomplish the missions with less money.

In 1992, the United States (US) re-organized the entire structure of the air transport system creating Air Mobility Command (AMC) as a part of a larger organization called US Transportation Command (USTRANSCOM) which manages the global mobility of personnel and materials via air, sea, and land.<sup>3</sup>

Some European countries wanted to create a similar structure to the US, but the existence of one Air Force, Navy and Army for each nation makes this process more difficult and complicated. Nevertheless, in 2009 four nations (Germany, France, Belgium, and the Netherlands) created the European Air Transport Command (EATC) located in Eindhoven (Netherlands) to manage multinational air transport using common resources among the participants.<sup>4</sup> In the following years, Luxembourg and Spain joined the EATC while Italy is part of the group from January 2016 as the seventh member.<sup>5</sup>

This monograph is a qualitative analysis that begins with an historic review of Air Mobility Command and an analysis of EATC capabilities and structures that identify the main shortfalls of such a young unit. This essay describes how some of the lessons learned from the AMC experience and how the participation of Italy in EATC from January 2016 can provide insights and recommendations to enhance the capabilities and efficiency of EATC.

#### **Thesis**

Multiple advancements to the capabilities and capacity of EATC can be realized by implementing procedural and minor organizational changes derived from AMC and the Italian Air Force. AMC experience and Italy's participation in EATC will enhance standardization, training and operations across the following six distinct areas: common procedures for airdrop operations, airworthiness certification, standardization of the training programs, fly duty regulations, highly infectious patient transportation capability, and on-site supervision in case of deployment with the creation of mobile units.

# Air Mobility Command

In 1992 the structure of the United States Air Forces was radically reorganized with the creation of the Air Combat Command (ACC) and Air Mobility Command (AMC). AMC was designated as the lead for airlifts and tankers. Initially the main airplanes assigned to this unit were C5, C17, C141, KC10 and KC135. In 1997 the C130s were integrated.<sup>6</sup>

In the US Department of Defense (DOD) the unit in charge of worldwide transportation via land, sea and air is USTRANSCOM. The USTRANSCOM Commander "exercises combatant command authority (COCOM) over all AMC forces. Operational control (OPCON) of these forces has been delegated to the commander of AMC, USTRANSCOM's Air Force component commander. As the air component command to USTRANSCOM, AMC is designated Air Forces Transportation (AFTRANS) (...). AMC/CC delegates operational control and appropriate authorities to 18<sup>th</sup> AF/CC to execute the AFTRANS mission (...). AFTRANS is

comprised of AMC, 18<sup>th</sup> AF, 618<sup>th</sup> AOC (TACC), SECDEF-assigned forces, and AMC-gained Air Reserve Component Forces." Today, AMC receives tasking from USTRANSCOM in support of global operations. AMC passes the tasks to 18<sup>th</sup> AF that decides through the 618<sup>th</sup> AOC (TACC) (Air Operation Center - Tanker Airlift Control Center) which wing has to fly the mission in the full range of air mobility operations. "18<sup>th</sup> AF (AFTRANS)/CC delegates tactical control (TACON) to 618<sup>th</sup> AOC (TACC)/CC of the AMC gained and assigned forces made available for allocation and execution." The 618<sup>th</sup> AOC (TACC) is divided in eight directorates, from the tasking to the final execution of the mission. In particular, one of these units, the 618<sup>th</sup> TACC/XOP, "projects mobility forces to achieve national goals and objectives in support of wartime needs, contingencies, aeromedical evacuation, exercises, humanitarian efforts, and it is the AMC's source for theatre augmentation and contingency respond assets."

AMC operates in response to immediate warfighting or human relief interventions in case of tragic natural events. When an onsite C2 structure is not available, "AMC expands the C2 structure by deploying its forces toward and within an area of responsibility. The 618<sup>th</sup> AOC (TACC) monitors ongoing air mobility operations to determine if and when augmentation/expansion is required. Typical tasked forces include Contingency Response (CR) forces (e.g., Contingency Response Group (CRG), Contingency Response Elements (CREs), and Contingency Response Teams (CRTs)) and assets from fixed AMC/Air Reserve Component (ARC) wings."

The redeployed units are self-sufficient; they provide Intel information, flight scheduling, maintenance, weather updates and security to the crews. However these cells are under OPCON of the 618<sup>th</sup> and they work closely with the AMC Threat Working Group (TWG) and 618<sup>th</sup> TACC/XOP for additional guidance.<sup>11</sup>

AMC "comprises four main components: the Active Duty forces (AD), the Air Force Reserve (A.F.Res), the Air National Guard (ANG.), and the commercial air carriers." The general principle underpinning this organization is that the day to day assignments are flown by the active duty component. When the airlift or tanker requirement overcomes the AD availability, AMC tasks the A.F.Res. assets and the ANG. Actually, AMC counts on volunteers from the Guard and the Reserve well before the need for a president activation of the reserve forces. Additionally, the employment of commercial airliners is quite common; in this case DOD has to pay the carriers for the shipped cargo<sup>13</sup>.

The number of aircraft assigned to AMC during the 1990s was designed to sustain two major theatres. The horrific terrorist attacks of 9-11 forced many countries to join their efforts to fight against Islamic extremists in Afghanistan and then in Iraq. AMC had to sustain a huge effort for the still ongoing operations. The requirements of airlifts and tankers exceeded the normal AD capability and to accomplish the mission aircrews had to continuously operate with ANG and AF Res assets. To facilitate access to assets of all the components, the concept of Total Force was integrated with the implementation of Total Force Integration squadrons (TFI). This idea allows each aviator to fly the airplanes of the other components. "A typical AMC TFI squadron has aviators, aircraft maintenance, supply and medical personnel assigned to the unit, but dispersed throughout the host wing to work with their respective counterparts. The supporting personnel—aircraft maintenance, supply, fuels specialist, etc.—make up the majority of a TFI squadron, with the manning of each squadron based on the number of aircraft assigned to the Guard or Reserve unit. Airmen of each component are perfectly integrated in the TFI squadron missions while each component is still responsible for its own funding to train and equip its members."14

Today, AMC is the pivotal US Force capability to deploy and redeploy the military instruments of power overseas.

#### **EATC**

Germany, France, the Netherlands and Belgium signed a letter of intent in 2007 to develop a Multinational European Air Transport Command. The objective of this agreement was to integrate and gradually transfer the air transport capabilities in a single multinational command to improve the effectiveness and efficiency of participant's military Air Transport effort. The initial capability was implemented from 1 July 2009; moreover, in the following years Spain and Luxembourg joined the venture and from January 2016 also Italy is part of the EATC. The EATC's goal is "to harmonize and optimize the preparation and the use, including planning, of airlift capacities, by achieving interoperability and standardization, thus fully supporting the coordinated use of military operations. It responds to the Participant's willingness to pool resources, while recognizing national responsibilities with regard to prioritization and caveats for national sensitive missions."

The EATC has three divisions, the first of which is the Operational Division that plans and tasks the missions, controls the daily flow of assets, and reports the data to the national commands. The second is the Functional Division that takes over of developing policies, common standard procedures, training, facilities and future multinational units. The third is the Policy and Support Division; it deals with the financial issues, policy and legal affairs, and quality/safety management.<sup>17</sup>

The nations that participate to the EATC program have different fleet composition and the first challenge was to integrate the new structure with the national chain of command and control. All the participants decided to delegate to EATC Operational Control (OPCON) while they maintained the Operational Command (OPCOM). The EATC Commander has a staff group support called "EATC advisory group" composed of national representatives, while the highest level decisions are taken at unanimous consent by the Multinational Air Transport Committee (MATraC).

The assets can be employed without restrictions in the territory of NATO members and European Union, beyond these borders it is required a clearance from the specific participant.

EATC can be involved in operations when not all the nations participate, the restriction is that only the assets of the countries cleared from the national chain of command can be engaged in some specific operation. The War in Libya was a clear example of what happens when nations disagree regarding some kind of military intervention. France, Belgium, and the Netherlands supported the war while Germany opposed; as a consequence of these different positions, the EATC planned mission in support of the Libyan operations involving only French, Belgian and Dutch assets. On the other hand, German airlifters were engaged in mission inside the European borders permitting the French, Belgian and Dutch air force to dedicate 100% of their efforts for the wartime operations.

In case of serious national reasons, the countries can revoke the TOA (Transfer Of Authority) without previous notice and without any obligation to justify the decision.<sup>18</sup>

The idea to share resources in a scenario where the assets provided by the different nations are completely different (as number and capabilities) is regulated using as common "unit of exchange," the C130 equivalent flying hour (EFH). "All cost incurred within exchanged

services will be expressed as credits using the EFH as the unit of measure."<sup>19</sup> The stakeholders have a share matrix that defines a relation between the basic currency and all the other airlifters. Each country is supposed to provide as many flying hours as it receives. Of course, there are small tolerances to give flexibility to the entire structure but the maximum allowable time to remain in debt is 60 months.<sup>20</sup>

EATC is an international organization that harmonizes the European needs of personnel and material transport sharing airlifters, but it is important to remember the assets are still part of each nation's military fleet. This partial relinquishment of authority from the national air force is the cause of the actual shortfalls. EATC cannot order the participants to invest in new research or equipment. The seven national fleets are using different procedures and equipment even when they are flying the same type of aircraft. Moreover, not all the states have the same competencies. For example, EATC has a shortage of some capabilities such as the JPAD airdrop procedures or aeromedical evacuation of infectious patients. The certification process by the national airworthiness authority is another element of disagreement. All the countries want to certify their own procedures even if other countries have already proved the same maneuvers or equipment. Furthermore, each nation tends to retain its procedures and every standardization process needs a lot of coordination. Pilot currencies and training programs are different, and flight duty regulations have some discrepancies as well.

Another weakness of EATC is the lack of deployable units to operate in response to immediate warfighting operations or human relief interventions in case of catastrophes or tragic natural events.

The Italian Air Force leads in some of these capabilities such as material airdrop procedures, JPAD, and aeromedical evacuation of infectious patients; therefore its participation

in the group will be fruitful for the European Air Forces. Additionally, positive relations with the US, resulting in unrestricted access to unclassified documents related to the above procedures, could enable EATC to fix its weaknesses.

In conclusion, EATC is a young structure and its success is principally based on agreements, trust and confidence among the nations who participate.<sup>21</sup>

#### Lessons learned from AMC and Italian Air Force useful for EATC

In January 2016 the Italian Air Force jointed the EATC. It is a great opportunity to bring into the "common basket" the experiences that the Italians gained during the last twenty years of operations with NATO allies. The first recommendation for EATC, based on multiple counterinsurgencies scenarios, is the need to develop standardized procedures to drop materials to remote locations in Afghanistan, Iraq or possible future battlefields. Since the 1940s, American war fighting doctrine for anti-guerrilla operations established the necessity of huge numbers of airlift operations.<sup>22</sup> Italy has always shared the principles of this doctrine although never involved in this kind of operations before 2001. After the tragic events of September 2001, Italy decided to stand with the US in the war on terror and the Italian Armed Forces were deeply involved in warfighting operations in Iraq and Afghanistan. In these regions the level of terrorism and insurgency<sup>23</sup> on the ground required the resupply of forward operating bases (FOBs) and combat outpost (COPs) using container delivery system (CDS) to parachute supplies using specialized containers.<sup>24</sup> However, this kind of operation presented three different issues. The first was that airlifts had to fly low level and low speed to drop the materials, exposing the aircraft to insurgency attacks with small arms, RPGs and possible man-pads. 25 Sometime the

resupply of a few hundred pounds could have cost the loss of the plane and its crew.<sup>26</sup> To cope with the situation AMC and the Italian Air Force introduced the joint precision air drop (JPAD) system; a system that allows dropping CDS safely from high altitudes. The containers are flown to the desired drop zone. Once dropped from the plane the JPAD are powered by battery motor, using GPS guidance coordinates to drive the parachute to the desired location. JPAD was an excellent solution for small amounts of cargo in dangerous environments. On the other hand, since each JPAD bundle cost many thousands of dollars, it was not efficient (too costly) to use JPAD for large amounts of cargo in drop zone with low enemy threat.

The second airdrop operations issue was that the normal parachute fabric was expensive, prone to damage, and costly to recover for repacking. Soldiers on the ground had to spend time recovering the materials and it often needed a second mission (usually using helicopters) to bring back the parachutes; this increased the cost of operations as well as the risk for the personnel involved. Americans and Italians faced the same kinds of problems. In 2006, the US Air Force introduced the low cost aerial delivery system (LCADS), a single-use parachute and cargo container that did not need to be recovered.<sup>27</sup> Italy is evaluating this opportunity for the future; likewise other European countries could be interested in this kind of implementation.

The third problem that the US and Italy had to face during airdrop operations was the lack of interoperability with allies. Airdrop operations need more procedural details than a general airlift. As a consequence, each nation was forced to drop its own bundles. Since 2005, the Italian Joint Air Task Force (JATF) stationed in Herat (Afghanistan) was allowed to pack only bundles to be dropped with the Italian C130J: and, the Italian C130J where only allowed to drop the bundles packed by the JAFT personnel.

The lessons learned from Italian experiences during airdrop operations provide the **first recommendation** for Europe. EATC needs to develop a plan to standardize airdrop procedures across all participating nations. The final outcome should be a standardized set of procedures that allows each nation to drop and recover materials (and men) of any other air force. Today only five nations out of seven have CDS capabilities.<sup>28</sup> Actually, only Italy has a profound knowhow of JPAD airdrop operations. The Italian Air Force reached this capability during the spring of 2010 and they launched the first JPAD in Afghanistan in December of that same year. Since January 2011 all the Italian crews assigned at the JATF (Afghanistan) were JPAD qualified and launched bundles using this special procedure when requested from the Intra-Theatre Airlift System (ITAS). In March 2015 the Italian Air Force withdrew its flying assets from Afghanistan. However, in consideration of the huge effort to reach this capability, the Italian C130J crews maintain their currencies flying JPAD training mission at least every 90 days. 40% of the Italian C130J crews are JPAD qualified.<sup>29</sup> The functional division of EATC should dedicate attention to develop this kind of common skills (taking advantage of the Italians experiences) since it is foreseeable that European forces will be involved in counterinsurgency operations in the next years.

However, the main problems to develop a multinational interoperability are not coming from dissimilar procedures, but they are coming from the employment of different dropping equipment. The European countries have developed with their national test authorities their own procedures that, at the end of the day, are working well. The real problem to overcome is national parochialism; the challenge is to find effective solutions that allow common procedure without forgetting the interests of the national military industries. This kind of approach should involve very high level interaction between military and civilian authorities; therefore the

recommendation is to create specific committees allowed to deal with the military industries avoiding low ranking officers, less effective committees. To be more specific, the recommendation is to develop conforming equipment to facilitate common procedures. In the past, attempts to standardize the procedures were more oriented to defining a long list of specific requirements for different equipment rather than finding common equipment.<sup>30</sup> The aim should be to define a specific technical configuration and common procurement among the European countries. Moreover, the next implementation in many EATC fleets of the new A400M is a great opportunity to implement common procedures/materials avoiding what happened with the C130 fleets where each nation had its specific technical configuration for airdrops operations.

The second recommendation for EATC is the need of an agreement between the European national airworthiness authorities. For instance, the introduction of the new Italian tanker, the Boeing KC-767, required new certifications for Italian fighters and bombers. Some of these aircraft (the Eurofighter, the PA200 Tornado, and the F16) are in other European military fleets but, for example, German and Spanish Eurofighters are not allowed to refuel from the Italian tankers without a previous certification from their national airworthiness authorities even though the Eurofighter aircraft was previously cleared as the Italian version. The same problem happened with the Belgian F16. Fixing this issue will save money and time and increase operational effectiveness. The advantages from a higher level of cooperation among the European countries could be useful when, for instance, the F35 will be introduced in the Italian and Dutch fleets.

During warfighting and training missions the relation between tankers and fighters goes beyond technical issues. It involves numerous flight currencies and training requirements that tanker and fighter pilots have to match before flying. Currently, each nation has different training programs and different standards<sup>31</sup> to define the minimum number of flying events the pilots have to complete to maintain their proficiency. For example, a French fighter pilot could be allowed to refuel from an Italian tanker after 44 days of refueling inactivity even if Italian regulations require a maximum of 30 days for Italian fighter pilots. In principle, each nation should be free to establish the rules that provide more flexibility according to its perspective. On the other hand, the EATC safety unit could begin an initial process of evaluation to standardized European flight currency requirements. **This is the third recommendation** based more on safety evaluations than practical needs. EATC is going to expand and in the future it could have more than seven nations sharing tankers and airlifters. Moreover, some countries could reduce their military spending in the next decades with negative repercussions on the pilots' training and currencies; therefore it will be desirable to begin an accurate process to define common minimum requirements in the name of flying safety.

The first recommendation was specific for airlifters, the second for tankers and airlifters, while the third is applicable for all the aircrafts under the EATC control.

"In the name of the safe operation of any flight, limits for maximum duty time and minimum rest time are published by the European Aviation Safety Agency (EASA) and national (civil and military) Aviation Authorities in Europe and worldwide. (...) In this perspective, the European Air Transport Command (EATC) has established a Flight duty regulation for Crew Members, making it possible to task the Air Transport/Aerial refueling assets that are under EATC OPCON in a common manner." The production of this document required huge efforts to harmonize a lot of "sub-regulations" which include the NATO STANAG 3527, the EAG TA (tactical Air Transport Crew employment), the EU-OPS, and the national regulations. The result is a very complex document that takes into accounts the needs of different stakeholders but does

not provide completely common accepted flight duty regulations. That is to say that members of different countries still have different limits and flight duty times. **The fourth recommendation** is to overcome the national parochialism and find a common ground of agreement. As for the previous items, the only solution to this issue is the creation of an "ad hoc" committee with high level ranking officers, legal advisors, and aeronautic doctors to establish a European set of rules with 100% common ground. The current flight duty regulations provide different duty times that make the planning process very complicated. Furthermore, in case of combined operations, this kind of discrepancy creates frictions among the crews.

The fifth recommendation comes from the recent outbreaks of the Ebola epidemic in the world, particularly in African countries. "There have been a lot of considerations about the transportation of passengers/patients out of the Ebola affected areas. Right now EATC has no highly infectious patient transportation capability under its operational control (OPCON)."<sup>33</sup> The Italian Air Force has developed a biological containment system to completely isolate the patient from the external environment. "Since aeromedical evacuation of infected patients may cause unique challenges and risks to air crews and medical personnel, it is appropriate to engage a dedicated flight with the deployment of an Aeromedical Isolation Team (AIT). AIT is a rapid response team which can be deployed anywhere in the world to transport patients with highly contagious infections and provide them medical care under high-level containment during flight."34 This particular capability involves a significant training with nurses, doctors, load masters and flight attendants since the slightest error could jeopardize the safety of the crew or the safety of the patient. Additionally, such capability developed by the Italian Air Forces entails the employment of logistic support developed by the Italian flight test center in Pratica di Mare. Italy could offer this capability to EATC to be used on request or could share its competences

with others nations willing to acquire these particular skills since the EATC is strongly interested in expanding its knowledge in the field of the aeromedical evacuation.<sup>35</sup> Moreover, international terrorism could escalate the level of attack using biological or bacteriological weapons; therefore EATC should draw a contingency plan to tackle a possible future emergency.

The sixth recommendation is about the creation of mobile units to offer on-site supervision in case of deployment to manage flying operations. AMC defined three levels of configuration as mentioned above. In case of international crises or urgent intervention to support people suffering from natural catastrophes, AMC has different on-call teams ready to deploy to provide C2 assistance in the area of operations. These units provide mission support for intelligence, maintenance, weather, logistic, medical, and security. The advantage of such units is the opportunity to control and coordinate all the operations with onsite direction because in case of deployment the normal military structure thousands of miles away could have some problems to manage the ongoing military actions.

The unstable condition in the Middle East does not allow foreseeing what is going to happen; the flexibility of the US system to respond to an emergency situation is a good example for EATC since every condition, from large scale deployment to a sporadic support, is a possible option in the next years.

Furthermore, in case of long term operations, such as the recent conflicts in Afghanistan and Iraq, AMC assigned part of its officers to the permanently redeployed units. Similarity, the EATC could shape its structure to support onsite the mobility operations in case of long term engagement.

#### Recommendations

To establish a precise plan of action, on the basis of the previous considerations, EATC should assign six separate multinational "ad hoc" committees. Every national team should be led by a high ranking officer (no less than Colonel) to assure that only decision makers are at the table.

- 1. The first committee should be part of the "Functional Division/Employment Branch." Each nation should provide one high ranking officer, two technicians and one civilian member coming from the military national industry to cope with the issue of airdrop standardization (equipment and procedures).
- The second should be supervised by the "Functional Division/Technical and Logistic Branch." Each nation should provide one high ranking officer, one legal officer, and two flight test center members to manage the issue of common aviation airworthiness.
- 3. The third should be within the "Functional Division/Training and Exercise Branch." Each nation should provide one high ranking officer, one legal officer, and two officers responsible for national training program to find common ground in training and currencies procedures.
- 4. The fourth should be supervised by the "Policy and Support Division." Each nation should provide one high ranking officer, one legal officer, one doctor, and one safety officer to find 100% common ground in flight duty limitations.
- 5. The fifth should be supervised by the EATC Commander since this committee has to deal with all the three divisions. Each nation should provide one high ranking officer and two members of the national flight test center members to define a

- long term strategy for infectious aeromedical evacuation. There are two options, the first is to define a limited number of nations capable to transport contagious patients and the second is to implement this skill in all the air forces.
- 6. The sixth should be supervised by the "Operational Division." Each nation should provide one high ranking officer in charge to delineate the composition of a deployment unit in case of military operations far away from Europe. The AIR MOBILITY COMMAND INSTRUCTION, 10-201 VOLUME 4, 02 December 2009 could be a useful guide line to develop such a project.

#### Conclusion

Germany, France, Belgium and the Netherlands founded EATC in 2009 and, in 2012-2016, Luxembourg, Spain and Italy joined the enterprise. EATC is expected to grow; therefore, the future management of this young, complex, and multinational organization can be strengthened by learning from the experience of AMC. In addition, Italy, as a new member, is poised to provide useful recommendations for EATC.

In the next several years, the EATC will endeavor to advance the capabilities and the interoperability of all the participants to face the new challenge of the unstable international equilibrium. This can be accomplished by implementing procedural and minor organizational changes derived from Italian Air Force and AMC. As can be expected, the growing terrorist threat will probably require special operations to defend Europe and its allies from possible attacks. These kinds of missions might require the employment of CDS or JPAD airdrops. The last update from Brussels shows five out of seven nations have CDS capability. As previously described, Italy should be considered the pivot around which to develop a standardized material

airdrop procedure. Moreover, the Italian Air Force is the only one that used the JPAD technique in warfighting missions. The others nations, except for the Netherlands, have to start from scratch to develop JPAD capability. Italy can share all its experience about success stories and failures during airdrop missions to create the backbone of the EATC tactical airdrop procedures. Furthermore, EATC could develop the low cost aerial delivery system (LCADS) to use in non-permissive environment when the risk to recover the parachute is too high. The strong bonds with the American allies will facilitate a relevant and effective download of information from the extensive experience of AMC in LCADS missions.

Additionally, in case of international major crises, EATC could be called to support massive deployed operations. Currently, EATC do not have mobile units to offer on-site supervision. On the other hand, AMC manages its deployments through different levels of operation. The American solution is a viable possibility/example since the array of logistics support Europe could need is extremely wide.

Likewise, in the near future, EATC might have to cope with epidemic of infectious disease that has spread through human populations. Since the Italian Air Force has developed this skill, the EATC could readily implement this capability.

The challenges for EATC include the consequences of the ambiguous and uncertain international environment, and, moreover, all the European partners are going to shrink their military spending. The future economic endeavors will be an issue. Italians could share with its European allies all the data of its airworthiness certifications. For instance, the Italian tankers have already refueled and certified the F35. Data, procedures, and statistics are available for other EATC country to avoid costly redundancy in the airworthiness process.

All the previous suggested improvements and the already proved capabilities could be more effective with standardized training programs and flight duty regulations. AMC has data based on millions of flight hours, and the American experience is a good reference for EATC. The well-known American safety attitude supports development of effective procedures. All the data are immediately available in case the EATC functional/policy and support divisions are interested in analyzing the documents to define new policies/procedures.



#### **Notes**

- 1. Laura L. Lenderman, *The Rise of Air Mobility and Its Generals* (Maxwell Air Force Base AL: Air University Press, 2007), VII.
- 2. Richard Jackson and Neil Howe, *The Graying of The Great Powers* (Washington, DC: Center for Strategic and International Studies, 2008), 89.
- 3. Robert C. Owen, *Air Mobility, A Brief History Of the American Experience* (Washington, DC: Potomac book, 2013), 254.
- 4. The Chief of Defense of Kingdom of Belgium, The Chief of Defense Staff of French Republic, The Chief of the Defense Staff of Federal Armed Forces of Germany, The Chief of Defense of the Kingdom of the Netherlands, *EATC Concept. Whole document* (Brussels, 11 May 2007), 2.
  - 5. EATC, Official Booklet October 2015 (Deutschland: Mediakompakt, 2015), 37.
  - 6. Robert C. Owen, Air Mobility, 254.
- 7. AMC, *Air Mobility Command Instruction, 10-202 VOLUME 1* (Scott AFB Illinois: Air Mobility Command Operations, 05 August 2014), 6.
  - 8. Ibid, 14.
- 9. AMC, 618 Air Operation Center (Tanker Airlift Control Center) Official Brochure, http://www.618tacc.amc.af.mil/shared/media/document/AFD-150629-028.pdf
- 10. AMC, *Air Mobility Command Instruction, 10-202 VOLUME 1*, (Scott AFB Illinois: Air Mobility Command Operations, 05 August 2014), 17.
- 11. AMC, *Air Mobility Command Instruction*, *10-202 VOLUME 4* (Scott AFB Illinois: Air Mobility Command Operations, 02 December 2009), 6.

- 12. Richard J. Hazdra, *Air Mobility, The Key To The United States National Security Strategy* (Maxwell Air Force Base AL: Air University Press, 2001), 14.
- 13. James K. Matthews and Cora J. Halt, *So Much, So Many, So Far, So Fast. United States Transportation Command and Strategic Deployment for Operation Desert Shield / Desert Storm* (Washington, DC: Official Publication of the Office of the Chairman of the Joint Chief of Staff and United States Transportation Command, 1996), 82-84.
- 14. L.C. Joe Santos, *Air Mobility Command's Total Force Integration: A Critical Analysis* (Carlisle, Pennsylvania: US Army War College, class 2012), 2.
- 15. Technical Agreement between the Minister of Defense of the Kingdom Belgium, the Minister of Defense of the French Republic, the Minister of Defense of the Federal Republic of Germany, the Minister of Defense of the Kingdom of Netherlands concerning the European Air Transport Command, Eindhoven, 04 December 2014, section 3.
  - 16. Ibid, section 5.
  - 17. EATC, Official Booklet October 2015 (Deutschland: Mediakompakt, 2015), 7.
- 18. The Chief of Defense of Kingdom of Belgium, The Chief of Defense Staff of French Republic, The Chief of the Defense Staff of Federal Armed Forces of Germany, The Chief of Defense of the Kingdom of the Netherlands, *EATC Concept. Whole document* (Brussels, 11 May 2007), 4-6.
  - 19. EATC, ATARES T.A. Annexes (Brussels, 01 January 2015), 5.
  - 20. Ibid, 6-7.
  - 21. EATC, Official Booklet October 2015 (Deutschland: Mediakompakt, 2015), 5.
  - 22. Robert C. Owen, Air Mobility, 280.

- 23. Bing West, *The Wrong War. Grit Strategy and The Way Out Of Afghanistan* (New York: the Random House Publishing Group, 2011), 113-117.
  - 24. Robert C. Owen, Air Mobility, 280.
- 25. John A. Skorupa, Self-Protective Measures To Enhance Airlift Operations In Hostile Environments (Maxwell Air Force Base AL: Air University Press, 1989), 31-33.
- 26. Charles E. Miller, *Airlift Doctrine* (Maxwell Air Force Base AL: Air University Press, 1988), 423-425.
  - 27. Robert C. Owen, Air Mobility, 280.
  - 28. EATC, *Unclassified Daily Reports*, December 2015.
  - 29. Italian Air Force, Unclassified Monthly Reports, December 2015.
- 30. EATC, European Cross para Booklet Version 1.2 (Eindhoven Airbase: 17 October 2014).
- 31. Stefan Nitschke, "European Air Transport Command Speaks Of Air-To-Air Refuelling Capability," Naval Forces, Vol. 35 Issue 3, 2014, 86.
  - 32. EATC, Flight Duty Regulation Ver. 2.1 (Eindhoven Airbase: 01 October 2013).
  - 33. EATC, Official Booklet October 2015 (Deutschland: Mediakompakt, 2015), 19.
- 34. Roberto Biselli, "Aeromedical Evacuation of Patients with Hemorrhagic Fevers: The Experience of Italian Air Force Aeromedical Isolation Team, Journal of Human Virology & Retrovirology," http://medcraveonline.com, 28 August 2015,

http://medcraveonline.com/JHVRV/JHVRV-02-00058.pdf

35. EATC, Official Booklet October 2015 (Deutschland: Mediakompakt, 2015), 19.

## **Bibliography**

- Bowie, Christopher, Fred Frostic, Kevin Lewis, John Lunch, David Ochmanek, and Philip Proppe. *The New Calculus: Analyzing Airpower's Changing role in Joint Theatre Campaigns*. Santa Monica, CA: Rand Corporation, 1993.
- Fisher, Rhonda L. *The Relevance and Future of Joint Logistic Over The Shore (JLOTS)*Operations. Washington, DC: National Defense University Joint Forces Staff College,
  Joint Advanced Warfighting School, 2013.
- Hazdra, Richard J. *Air Mobility, the Key of United States National Security Strategy*. Maxwell Air Force Base AL: Air University Press, 2001.
- Jackson, Richard and Howe Neil. *The graying of the Great Powers*. Washington, DC: Center for Strategic and International Studies, 2008.
- Johnson, E. Richard. *American Military Transport Aircraft Since 1925*. Jefferson, North Carolina: Mcfarland Company, 2013.
- Kilcullen, David J. Counterinsurgency. New York: Oxford University Press, 2010.
- Lenderman, Laura L. *The Rise Of Air Mobility And Its Generals*. Maxwell Air Force Base AL: Air University Press, 2007.
- McGarvey, Ronald G. Commercial Intratheatre Airlift: Cost-Effectiveness Analysis of Use in US Central Command. Santa Monica, CA: Rand Corporation, 2013.
- Matthews, James K. and Cora J. Halt. So Much, So Many, So Far, So Fast. United States

  Transportation Command and Strategic Deployment for Operation Desert Shield / Desert

  Storm. Washington, DC: Official Publication of the Office of the Chairman of the Joint

  Chief of Staff and United States Transportation Command, 1996.

- Miller, Charles E. Airlift Doctrine. Maxwell Air Force Base AL: Air University Press, 1988.
- Mouton, Christopher A. *Maximizing throughput at Soft Airfield Command* . Santa Monica, CA: Rand Corporation, 2013.
- Nitschke, Stefan. European Air Transport Command Speaks Of Air-to-Air Refuelling Capability. Naval Forces, Vol. 35 Issue 3, 2014.
- Owen, Robert C. *Air Mobility, a Brief History of the American Experience*. Washington, DC: Potomac Book, 2013.
- Santos, L.C. Joe. *Air Mobility Command's total Force Integration: a critical analysis*. Carlisle, Pennsylvania: US Army War College, class 2012.
- Stewart, Rory. The Place in Between. Orlando, FL: Harcourt Books, 2006.
- Skorupa, John A. Self-Protective Measures to Enhance Airlift Operations in Hostile Environments. Maxwell Air Force Base AL: Air University Press, 1989.
- West, Bing. *The Wrong War. Grit Strategy And The Way Out Of Afghanistan*. New York: the Random House Publishing Group, 2011.
- AMC. Air Mobility Command Instruction, 10-202 VOLUME 1, 05 August 2014.
- AMC. Air Mobility Command Instruction, 10-202 VOLUME 4, 02 December 2009.
- EATC. Official Booklet October 2015.
- EATC. ATARES T.A. Annexes, 01 January 2015.
- EATC. European Cross para Booklet Version 1.2, 17 October 2014.
- EATC. Flight Duty Regulation Ver. 2.1, 01 October 2013.
- EATC. Unclassified daily reports, December 2015.
- Italian Air force. *Unclassified monthly reports*, December 2015.

- The Chief of Defense of Kingdom of Belgium, The Chief of Defense Staff of French Republic,

  The Chief of the Defense Staff of Federal Armed Forces of Germany, The Chief of

  Defense of the Kingdom of the Netherlands. *EATC Concept. Whole document*, 11 May
  2007.
- Technical Agreement between the Minister of Defense of the kingdom Belgium, the Minister of Defense of the French Republic, the Minister of Defense of the Federal Republic of Germany, the Minister of Defense of the kingdom of Netherlands concerning the European Air Transport Command, 04 December 2014.
- United States. Air Force Audit Agency, *Aircraft Weight Reduction*, Washington, DC: Air Force Audit Agency, 2013.

US Joint Force Command. Air Mobility Operations: Joint Publication 3-17, 30 September 2013.